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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,509	01/15/2004	Masashi Gabe	953.1014	4623

21171 7590 11/23/2005

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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GREENE, JASON M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/757,509

Applicant(s)

GABE ET AL

Examiner

Jason M. Greene

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/25/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. The abstract of the disclosure is objected to because it contains the legal phraseology "means" in lines 3-4 and is not limited to one paragraph in length. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobashi (U.S. patent No. 4,452,040) in view of Cooper et al. (U.S. Patent No. 4,902,487).

Kobashi discloses an exhaust gas purifying system having a diesel particulate filter (11) installed in the exhaust passage (10,12) of a diesel engine (1) provided with a glow plug (7) and a regeneration control means (control devices 8,17) for regenerating said diesel particulate filter, characterized in that said regeneration control means performs retarded injection or post-injection in the control of fuel injection into a cylinder (2<sub>1</sub>-2<sub>4</sub>) and heating the inside of the cylinder by said glow plug (7) for regenerating said regenerable diesel particulate filter in Figs. 1 and 3, col. 15, lines 5-44 and col. 19, line 6 to col. 20, line 14.

Kobashi teaches providing a catalyst on the diesel particulate filter, but does not disclose the filter being a continuous regeneration diesel particulate filter.

Cooper et al. teaches using a continuous regeneration diesel particulate filter (1,3) to remove particulate matter from diesel exhaust in Fig. 1 and col. 1, line 44 to col. 4, line 11.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the continuous regeneration diesel particulate filter of Cooper et al. into the system of Kobashi et al. to allow the filter to be regenerated at a lower temperature, as suggested by Cooper et al. in col. 1, lines 44-56.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobashi (U.S. patent No. 4,452,040) in view of European Patent Application Publication EP 1 234 959 A2.

Kobashi discloses an exhaust gas purifying system having a diesel particulate filter (11) installed in the exhaust passage (10,12) of a diesel engine (1) provided with a glow plug (7) and a regeneration control means (control devices 8,17) for regenerating said diesel particulate filter, characterized in that said regeneration control means performs retarded injection or post-injection in the control of fuel injection into a cylinder (2<sub>1</sub>-2<sub>4</sub>) and heating the inside of the cylinder by said glow plug (7) for regenerating said regenerable diesel particulate filter in Figs. 1 and 3, col. 15, lines 5-44 and col. 19, line 6 to col. 20, line 14.

Kobashi teaches providing a catalyst on the diesel particulate filter, but does not disclose the filter being a continuous regeneration diesel particulate filter.

EP 1 234 959 A2 teaches using a continuous regeneration diesel particulate filter (1,3) to remove particulate matter from diesel exhaust in Fig. 1 and paragraph [0032].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the continuous regeneration diesel particulate filter of EP 1 234 959 A2 into the system of Kobashi et al. to allow the filter to be regenerated at a lower temperature, as suggested by EP 1 234 959 A2 in paragraph [0032].

### ***Conclusion***

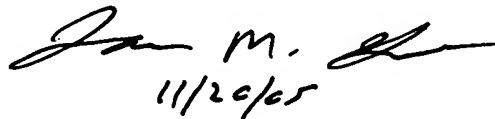
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Ludecke et al., Rossi Sebastiano et al., Iwai et al., Takeshima, Hirota et al. and Fluga et al. references disclose similar systems.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M. Greene  
Examiner  
Art Unit 1724



11/20/05

jmg  
November 20, 2005